HANDBOOK OF PHONOLOGICAL DATA
FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

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785 Maidu

785 01 p-aspirated[01]
[p-unreleased][60]
[p][60]

785 02 p-ejective[02,30]

785 03 b-implosive[03,30]

785 04 t-aspirated[01]
[t-unreleased][60]
[t][60]

785 05 t-ejective[02,30]

785 06 d-implosive[03,30]

785 07 c-aspirated[01,04,31]
(limited)
[c-unreleased][60]

785 08 c-ejective[02,04,30]

785 09 k-aspirated[01]
[k-prevelar-aspirated][61]
[q-aspirated][62]
[k-unreleased][60]
[k-prevelar-unreleased][60,61]
[q-unreleased][60,62]
[k][60]
[k-prevelar][60,61]
[q][60,62]

785 10 k-ejective[02,05,30]

785 Maidu

12 s[06]
[s-lax][63]
[s-long][63]

13 m
[m-voiceless][64]
(free)
[eng][65]
[m-lax][66]

14 n[07]
[n-voiceless][64]
(free)
[n-lax][66]

15 l[08]

16 h
[x-prevelar][09,67]
[x-uvular][09,67]

17 glottal stop[10,30]

51 i[11]
[iota][12,68]
[i-long][13,14,68]
[i-over-short][15,68]
[iota-over-short][15,68]

785 Maidu

52 e-mid
[epsilon-long][14,16,69]
[epsilon-over-short][15,16,69]
[e-mid-over-short][15,69]

53 i-bar[11]
[i-bar-long][11,14,68]
[i-bar-over-short][15,68]
[iota-bar][12,68]
[iota-bar-over-short][15,68]

54 u[11]
[upsilon][12,68]
[u-long][13,14,68]
[u-over-short][15,68]
[upsilon-over-short][15,68]

55 o-mid
[o-open-long][14,16,69]
[o-open-over-short][15,16,69]
[o-mid-over-short][15,69]

56 a
[a-long][14,70]
[caret-over-short][15,70]

57 yod[32]
[iota-glide][71]

58 w[32]
[upsilon-glide][71]

785 $a Maidu $b Northeastern $B Mountain $d Penutian $e N California (Sierra) $f under 10 $g Merritt Ruhlen $g Marc Okrand (review)

785 $a Shipley, William F. $b 1964 $c Maidu Grammar $f (UCPL 41) $g Berkeley: U. C. Press $q informants $r 3 years

785 $a Shipley, William $b 1956 $c The Phonemes of Northeastern Maidu $d IJAL 22.233-237 $q informants $r 1 summer

785 $a **BASE OF ARTICULATION** $A "Maidu is laxly articulated and is normally pronounced slowly and deliberately. Fortis articulation and rapidness of delivery connote emotion, especially impatience or irritation." (p.7) "Coupled with lenis articulation are certain phonological phenomena" which take place in allegro speech. (Shipley 1956, p.233)

785 $a **INTONATION** $A Intonation is analyzed in terms of juncture phonemes. (p.12-14) "Plus juncture," or word boundary, is characterized by a slight rise in pitch. "Comma juncture," or phrase boundary, is characterized by a slight rise in pitch "and a clearly marked short silence before the onset of the next phrase." (p.13) (There is usually also a "lenis, syllable-final glottal catch, distinct from /glottal stop/." (p.12) A nasal preceding "comma juncture" is unsually voiceless.) "Period juncture," or sentence boundary, is characterized by a slight drop in pitch "and a [high-to-low pitch] glide on a preceding syllable with primary stress.... If the preceding syllable does not have primary stress, then there is a [low pitch] on all syllables back to the end of the last syllable with primary stress (which is itself unaffected)." (p.14) (A nasal preceding "period juncture" is usually voiceless.)

785 $a **STRESS** $A Each syllable is characterized by primary or secondary stress (stressed syllables) or weak stress (unstressed syllables). Within a word, only one syllable has primary stress, all subsequent stressed syllables having secondary stress. No word has only secondary stress, and (except for a very few monosyllabic words) no word is completely unstressed. Stress may fall on root or affix or both. (p.13-18, 21) "In short, stress is phonemic." (Shipley 1956, p.233) Primary stress is characterized by high pitch and "relative loudness and tenseness in the following syllable." (p.12-13) Vowels under primary stress are long in open syllables, short in closed syllables. (p.13) Secondary stress is characterized by free variation between middle and low pitch, and "relative loudness and tenseness in the following syllable." (p.12-13) Vowels

under secondary stress are long in open syllables, short in closed syllables. (p.13) Weak stress is characterized by free variation between middle and low pitch, and very short vowels. (p.13)

785 $a SYLLABLE $A CV(:)(C) $A initial C: any C or G $A final C: all C or G except implosive and ejective stops, and /glottal stop/. Final /h/ is rare.

785 $a VOWEL HARMONY $A Somewhat over half of the disyllabic roots of Maidu have identical vowels. (p.21) "In many cases this is associated with total reduplication of the syllable." (Shipley 1956, p.237) There is a small amount of vowel harmony associated with suffixation. (1) Following /k-aspirated/ or /k-ejective/, the vowel of certain suffixes is identical to the vowel immediately preceding the velar stop. Following other consonants or glides, it is /i/. (2) In some suffixes, the vowel or vowels are always identical to the preceding vowel. (3) The vowel of some suffixes is /e-mid/ when the next vowel is also /e-mid/; otherwise, the vowel is /a/. (p.16-17)

785 $a VOWELS $A "The most dramatic effect of allegro speech is...the centralization of the vowels in unstressed syllables.... /i-bar/ and /a/ exhibit unstressed, rapid-speech allophones which approach [schwa] very closely. At times it is difficult to distinguish an allophone of /a/ from one of /i-bar/. /i/ and /u/ centralize just enough for the ear to catch the effect. Their movement to the center is accompanied by a marked drop to the neighborhood of [iota] and [upsilon] respectively. /e-mid/ and /o-mid/ do not approach [schwa] so closely as /i-bar/ and /a/, but they centralize much more than do /i/ and /u/. The only restriction to this centralizing in allegro speech is consistency in a given utterance, that is, a speaker will place all of the unstressed vowels at a balanced distance from [schwa]." (p.11)

785 01 $A The aspirated stops are "moderately aspirated" and "rather fortis" (p.8); they "tend to lose aspiration in rapid speech." (Shipley 1956, p.236)

785 02 $A "In rapid speech...the glottalized stops become very weakly glottalized so that the aspirated and glottalized series fall together to some extent." (Shipley 1956, p.236) Nevertheless, "some slight glottal coarticulation is never absent." (p.7) These consonants are "normally lax, particularly when...not word initial.... Only in some idiolects or in emphatic speech is fortis glottalization employed." (p.7)

785 03 $A In producing the implosives "a partial vacuum is formed in the area between the glottis and the point of articulation. The release is effected by breaking this vacuum, with a resulting slight rush of air into the mouth.... It is important to note that nonimplosive allophones for /b-implosive/ and /d-implosive/ do not occur." (p.7) "In some idiolects the implosives are startlingly fortis, with a clearly audible smacking or clicking sound at the instant of release. Other speakers produce less fortis implosions, although in contrast to the characteristically lax pronunciation of the language in general, the articulation of /b-implosive/ and /d-implosive/ is tense in all idiolects before high vowels, particularly /i-bar/." (p.7) "...in allegro speech, ...the implosion becomes more lenis." (Shipley 1956, p.234)

785 04 $A /c-aspirated/ and /c-ejective/ are "similar to [t/s-hacek]. In the speech of older persons, [they are] lamino-palatal stops; younger bilingual informants, however, have substituted an affricate, presumably because of the influence of English." (p.7)

785 05 $A "/k-ejective/ is not conditioned by the following vowel but is always fairly backed due, no doubt, to the simultaneous glottalization. It therefore differs in this respect from /k-aspirated/." (Shipley 1956, p.234)

785 06 $A /s/ is "a postalveolar slit spirant, backed but without retroflexion. Younger bilingual speakers tend, at times, to substitute a more fronted spirant in some positions; monolinguals, however, invariably produce allophones clustering around [s]." It is "somewhat fortis" syllable-initially; when geminated it is "long and fortis." It is "backed" word-finally. (p.9)

785 07 $A No point of articulation is given for /n/.

785 08 $A /l/ is "somewhat longer in postvocalic position, but it has no backed quality in that position." (p.10)

785 09 $A [x-prevelar] and [x-uvular] have "minimum friction." (p.9)

785 10 $A "/glottal stop/ is weakly articulated except when the speaker is being emphatic or deliberate. The phomeme is virtually absent in some idiolects or in allegro discourse." (p.8)

785 11 $A The usual quality of /i/, /u/ and (in non-word-initial syllables) [i-bar-long] is slightly lower than high, but there is free variation in the direction of, and as far as, high. (p.10-11) /i-bar/ is also slightly lower than high.

785 12 $A The usual quality of [iota], [iota-bar], [upsilon] is lower-high, but there is free variation in the direction of, and as far as, a somewhat lowered high vowel. (p.10-11)

785 13 $A In non-initial syllables, the usual quality of the long high vowel allophones is high, but there is free variation in the direction of, and as far as, a somewhat lowered high vowel. (p.10-11)

785 14 $A The long vowels are about one and a half to two morae in length. (p.10) "In allegro speech, ...distinctions of length are much less marked." (p.11)

785 15 $A The over-short vowels are somewhat centralized in allegro speech. (p.11)

785 16 $A In word-initial stressed open syllables, the quality of the lower-mid vowels is slightly lower. (p.11)

785 30 $A The glottalized stops and implosives and /glottal stop/ are "limited to syllable-initial position." (p.6)

785 31 $A /c-aspirated/ "is a rare phoneme, with only five occurrences in the total corpus." (p.8) Four of these five occurrences are prevocalic.

785 32 $A /yod/ and /w/ never occur after /i/ or /u/ (respectively) in the same syllable. (p.10)

785 60 $A The aspirated stops are unreleased before a nasal or a stop [including the latter portion of a geminate] in the same or following word; they are lax and released but unaspirated before a fricative, glide, or /l/ in the same or following word. (p.8)

785 61 $A /k-aspirated/ is fronted before /i/ or /e-mid/ (and presumably also after /i/ or /e-mid/ if phrase final, though this is not stated explicitly).

785 62 $A /k-aspirated/ is realized as [q-aspirated] before /u/ and /o-mid/ and after /u/ and /o-mid/ phrase-finally. (The latter environment is exemplified but not explicitly stated.) (p.9)

785 63 $A /s/ is short and lax before a stop or nasal or word-finally, and is "rather long" (and "fronted") before a glide or /l/. (p.9)

785 64 $A "In sentence-final position, .../m/ and /n/ are represented by a continuum of phonetic possibilites ranging from complete voicelessness to complete voice." (p.9) Devoicing occurs phrase-finally also. (p.13) "The oldest speakers of NE Maidu pronounce voiceless nasals in final position much more frequently than the younger ones." (Shipley 1956, p.235)

785 65 $A /m/ is realized as [eng] before a velar stop. (p.9, 13) (Shipley (1956, p.235) states that [eng] occurs before /w/ also; this is not given in Shipley 1964. Also, Shipley (1956, p.235) states that [eng] occurs before a velar stop (or /w/) in the following word, except in "extremely precise and careful speech;" Shipley (1964, p.13) states flatly that "a bilabial allophone of /m/" occurs before a word boundary. Shipley 1964 is followed here.)

785 66 $A /m/ and /n/ are lax before consonants and glides. (The rule apparently applies across word-boundaries.)

785 67 $A /h/ is realized as [x-prevelar] before /i/ and as [x-uvular] before /e-mid/ and /i-bar/.

785 68 $A The high vowels are realized as lower-high in word-initial, stressed closed syllables, as long in open syllables, as over-short in unstressed open syllables, and as lower-high and over-short in unstressed closed syllables.

785 69 $A The mid vowels are realized as lower-mid and long in stressed, open syllables, as lower-mid and over-short in unstressed, closed syllables, and as mid and over-short in unstressed, open syllables.

785 70 $A /a/ is realized as [a-long] in stressed open syllables and as [caret-over-short] in unstressed syllables.

785 71 $A /yod/ and /w/ are lowered before a non-high vowel and after a non-high vowel if word-final or followed by a consonant or glide.